



July 11, 2016

Chair Karl Longley
Central Valley Regional Water Quality Control Board
1020 Sun Center Drive, Suite 200
Rancho Cordova, CA 95670-6114

RE: Comments on the Tentative WDR General Order for Oil Field Discharges to Land

Dear Chair Longley:

On behalf of the undersigned organizations, we submit these comments regarding the "Tentative Waste Discharge Requirements General Order[s] for Oil Field Discharges to Land" (hereinafter called the Orders). We appreciate the Central Valley Regional Water Quality Control Board (hereinafter the Board) undertaking an effort to prevent ground and surface water contamination from oil and gas wastewater disposal pits. It demonstrates that the Board recognizes that the current practice of disposing of produced water into unlined and open percolation pits is problematic. However, much work remains, as these orders do not fully achieve the stated goals of protecting water quality. Based on the available scientific consensus and available data, the only way for the Board to ensure water quality protection is to prohibit the disposal of produced water into open pits and onto land.

Since our comments were largely dismissed, many of the points below are repeated from our May 27 comments. We are hopeful that the lack of responsiveness to our recommendations was a result of the short amount of time between receiving our comments and the release of the Tentative Orders, and that substantive changes will be reflected in the Orders prior to adoption.

Through its staff, the Board has identified numerous disposal sites, such as the Fee 34, Racetrack Hills and McKittrick facilities, which are known to have issues resulting from historically inadequate oversight and inherently risky activities. Staff inspections of these sites, and in some cases Board decisions have identified leaking or ineffective liners, a massive plume of produced water migrating underground, and the likely migration of chemicals into an aquifer. The Racetrack Hills facility continues operating despite having an unpermitted spray field where

Board staff determined that a plume of contamination is likely percolating into an aquifer, and contaminant build up presents surface runoff risks. All of these facilities continue to operate despite problematic operations. We also recall the Starr Farms/Aera Energy case where a waste pond polluted adjoining irrigation wells. This demonstrated poor track record of operating disposal pits safely furthers our opposition to this method and adds urgency to the Board's adoption of orders that provide real protections for water quality.

We suggest the following recommendations apply generally to all orders and/or to supporting activities and/or documents pursuant to this entire process.

General Recommendations

1. First, the Board should issue emergency orders that mandate the immediate halt to discharge until operators demonstrate compliance with the Basin Plan and the Water Code. To allow discharge to continue while the orders are being developed means that it is likely that facilities are operating in violation of the goals and objectives of these orders. The Board should take a more precautionary approach.
2. We believe the way the Board is proposing to handle CEQA is inadequate. The time to address this shortcoming is now, through the General Order, which is in effect the initial permitting for many of these projects.

The Orders assert that all existing ponds are all categorically exempt, and for new ponds, the discharger must provide evidence of compliance with CEQA in the form of a certified EIR, Mitigated Negative Declaration, or Negative Declaration. For the latter, the Board should indicate who the lead agency would be in these cases. Is the Discharger complying with CEQA through a local government or through the Board?

For existing ponds, it appears the Board is proposing to grandfather-in all existing ponds within its jurisdiction. We see this action as having a potential significant environmental impact that must be addressed through the application of CEQA to the General Order before the Board can approve it. Grandfathering in all of the existing ponds has significant implications for air and water quality and for land use. Clearly, some of the existing facilities have impacts on the degraded air quality of Kern County due to emission of VOCs, and the cumulative impact on air and water from the discharges is not being addressed by the Orders. Also, as addressed in a paragraph above, some of the water from the ponds is already reaching groundwater or will reach groundwater and this impact must be addressed.

We bring to your attention 14 CCR 15300.2(c) (CEQA regulations) which states that a categorical exemption shall not be used for an activity where there is a reasonable possibility that the activity will have a significant effect on the environment due to unusual circumstances. We suggest that using pits, whether lined or unlined, to dispose of industrial wastewater that contains hydrocarbons, heavy metals, large quantities of salts, and various chemicals used in the oil drilling and production process is not a usual circumstance.

Furthermore, 14 CCR 15300.2(b) states that a categorical exemption cannot be used when the cumulative impact of successive projects of the same type in the same place is significant. This could exactly be the case for the situation that these Orders are attempting to address. Without a CEQA analysis as part of these Orders, we do not believe that the Board can find that cumulative impacts are not significant, and therefore the Categorical Exemption cannot be used.

The Board has acknowledged that many of these ponds were never properly permitted, that is, they do not have valid WDRs. Therefore, environmental review either in the form of an EIR or Mitigated Negative Declaration was never done for those ponds. Now, the Board proposes to call them “existing” and therefore “exempt” from CEQA. This appears to be a work-around of the issue of a bona fide CEQA analysis for hundreds of ponds that may have significant environmental effects, individually and cumulatively.

3. The Board must clarify additional situations where discharge to land or ponds is not permissible. The three orders specify general scenarios where discharge into pits may be allowed, however the Board should specify circumstances that do not fit any of the general orders and are therefore not allowed. For example:
 - a. The Orders should establish mandatory setbacks from water wells, beneficial use aquifers, surface water ways, homes, schools, businesses, roads, etc.
 - b. The orders should prohibit discharge if the Board cannot rule out the presence of harmful chemicals in the wastewater, either as a result of naturally occurring constituents in the formation fluid or because harmful fluids have been used as additives and may be present in the waste stream. The orders correctly prohibit waste from stimulated wells from being discharged to land or pits. However the orders must also consider chemicals related to other oil and gas processes, beyond well stimulation. The California Council on Science and Technology (CCST), has recommended:

“Recommendation 4.1. Ensure safe disposal of produced water in percolation pits with appropriate testing and treatment or phase out this practice.

“Agencies with jurisdiction should promptly ensure through appropriate testing that the water discharged into percolation pits does not contain hazardous amounts of chemicals related to hydraulic fracturing as well as **other phases of oil and gas development**. (Bold added for emphasis) If the presence of hazardous concentrations of chemicals cannot be ruled out, they should phase out the practice of discharging produced water into percolation pits.”¹

¹ California Council on Science and Technology “An Independent Scientific Assessment of Well Stimulation in California” July 2015, Executive Summary p. 8

4. All three of the general orders contain a note, in the “Statutory and Regulatory Considerations” section, on the findings of the CCST study. The Orders correctly state that CCST concluded that produced water from stimulated wells may contain well stimulation chemicals. The findings should also include that CCST concluded that produced water may contain chemicals from other phases of oil and gas production, not just well stimulation. If the orders include findings from that study, the most directly relevant recommendation (which appears above) must be included. We request adding this finding into the “Background Information” section of each of the orders.
5. The Board should expand its inventory of all pits to specify which general order applies to each existing facility, based on the data already collected under previously issued 13267 orders. The inventory should also specify which facilities do not fit any of the orders, based on current information about wastewater quality and the presence and quality of underlying groundwater.
6. The Orders should include enforcement provisions that violations or failure to comply with the orders would result in immediate shut down.
7. The Orders should specify that Board staff or contractors of the Board are authorized to enter facilities without advance notification, to conduct inspections, take water samples and/or conduct other business as needed in order to enforce the orders.

“Information Needs Sheets” Recommendations

1. We strongly object to how the orders handle Resolution 68-16 (State Anti-degradation Policy). The information sheet appears to give blanket license for operators to degrade groundwater up to Basin Plan maximum salinity limits. Under Resolution 68-16, degradation of waters with beneficial uses must be “consistent with maximum benefit to the people of the State.” The economic arguments listed in the information sheet are wholly inadequate to make that determination. They do not address anything related to the benefit of discharging wastewater into open pits. If the orders are an attempt to justify oil production benefits to the people of the state, then it must provide an actual cost benefit analysis that considers the many costs oil production, such as degraded air quality, water quality, health impacts and associated medical costs, destruction of farmland, nuisance to neighbors, and contribution to climate. The information sheet of a WDR General Order is not the appropriate venue to make a judgment about the entire oil industry. Instead, operators must conduct an anti-degradation analysis that shows the costs and benefits of a specific discharge if they intend to degrade waters with beneficial uses.

Additionally, the Anti-degradation section envisions degradation up to the water quality objective. This proposal does not consider other activities that may cause additional

degradation. We object to the Orders' allocating the full assimilative capacity of these aquifers to the oil and gas industry.

2. While we support the collection of significant information as specified in the "Information Needs Sheets", we urge the Board to strengthen the disclosure requirements for chemicals used in each oil field. Without enhanced chemical disclosure, it is impossible to ensure protection of water quality.
 - a. Senate Bill 4 (Public Resources Code 3160) established strong and appropriate disclosure requirements for chemicals used well stimulation treatments. The orders should require chemical disclosure requirements that are consistent with the SB 4 requirements for all chemicals used in oil fields where any produced water is sent to disposal pits. SB 4 requires reporting within 60 days of chemical use. We recommend that timeline as opposed to quarterly reporting.
 - b. The trade secret provisions in SB 4 (PRC 3160 (j)) should be replicated for all chemicals used in fields where produced water may be discharged to land or pits. Trade secret provisions such as those in SB 4 are necessary to ensure operators do not hide the identities of chemicals that could enter the waste stream, and eventually impact water quality.
 - c. Operators should submit additional information about the fate and transport, testing and detection methods, and health impacts of each chemical used. Based on this information, the Board should limit land applications for wastewater that contain certain chemicals as a result of their use in production or maintenance. The following chemical disclosure information should be used as criteria that would prohibit land or pit discharge:
 - i. If chemicals are used that do not have established detection methods.
 - ii. If chemicals that are hazardous to human health or the environment are used, and cannot be reasonably shown to have NOT entered the waste stream.

Monitoring and Reporting Programs (MRP) Recommendations

We support the robust effort to characterize water quality, detect groundwater impacts and gather information. We recommend the following changes in order to make the MRP's more effective:

1. The MRP's groundwater monitoring section should include more specific requirements about baseline testing in order to measure the quality of groundwater. The baseline testing should occur prior to any discharge for any new or expanded facilities.
2. The orders should specify an approval process for the groundwater monitoring plans that gives the Board the ability to require changes to the monitoring program design prior to approval. This process should be consistent with the current practice used for well stimulation treatments' monitoring plans mandated by SB 4. Until the monitoring plan is approved, discharge must cease.

3. The orders should specify Board staff or contractors' rights to conduct independent monitoring and testing of samples in order to verify accuracy and completeness of operator submitted monitoring results, as well as protocols for requesting split samples and observing sampling collection.

General Order Comments

General Order 1

1. The contaminant thresholds for qualifying for this order must be expanded. Simply using EC, Chloride, and Boron is inadequate. In order to qualify under General Order 1, produced water must contain below safe harbor limits for Proposition 65 chemicals, and also contain below long-term Effects Screening Levels for any other harmful chemical, either those added in production and maintenance or naturally occurring in the formation fluid.
2. It appears that this aspect was weakened since the Administrative draft. The Discharge Specifications were amended to remove prohibitions on discharging organic chemicals, including BTEX as well as a maximum oil and grease concentration. We strongly object to this change and it is exactly the opposite of our recommendation above.

General Order 2

1. The Board must not permit produced water that exceeds Basin Plan limits, or the chemical thresholds described above (in our recommendation for General Order 1), to be discharged onto land or into pits. This change would result in the orders being consistent with CCST's recommendation that produced water containing harmful chemicals not be stored or disposed of into unlined pits or discharged to land.
2. Dust control with contaminated wastewater must also be prohibited.

General Order 3

1. The order does not adequately define "first encountered" groundwater. In order for a discharge facility to qualify for GO 3, the operator must demonstrate that any underground migration from the facility cannot and will not enter groundwater that may have beneficial uses. This analysis should not simply rely on the characterizing the groundwater (or claiming an absence of groundwater) directly beneath the discharge site, but should also consider horizontal migration, naturally occurring or human-made pathways, and changes in groundwater movement that could result from discharge. The operator should have to demonstrate complete isolation/confinement of any fluids discharged on the site. Any such claims must be supported with adequate geologic modeling and verified by the Board with an explicit approval process. Until such approval is granted, discharge must be prohibited.
2. The order outlines a process for de-designating groundwater from beneficial uses. We agree that in order to claim that underlying groundwater is low quality this process must occur. We object to the option of de-designating groundwater with less than 10,000 total

dissolved solids. The 3,000 TDS limit is arbitrary and does not meet federal standards for an Underground Source of Drinking Water (USDW). Additionally, we strongly object to operators being allowed to continue to discharge while that process is occurring. The timeline provided could allow for up to five years of discharge before the denial of a de-designation application. The order must specify that no discharge can occur while the de-designation process is ongoing.

Thank you for the opportunity to provide comments.

Sincerely,

Bill Allayaud
California Director of Gov't Affairs
Environmental Working Group

Keith Nakatani
Oil and Gas Program Manager
Clean Water Action

Dan York
Vice President
The Wildlands Conservancy

Patricia McPherson
President
Grassroots Coalition

Tanja Srebotnjak, PhD
Hixon Center for Sustainable Env. Design
Harvey Mudd College (no logo at top)

Sue Chiang
Pollution Prevention Director
Center for Environmental Health

Jennifer Krill
President
Earthworks

Jean Hays
Earth Democracy Team
Women's Int'l League for Peace & Freedom

Jason R. Flanders
Attorney
Aqua Terra Aeris Law Group

Kimberly Rivers
Executive Director
Citizens for Responsible Oil & Gas

Barbara Sattler
RN, DrPH, FAAN
Alliance of Nurses for Healthy Environments

Nayamin Martinez
Coordinator
Central Calif. Environmental Justice Network

Paul Ferrazzi
Executive Director
Citizens Coalition for a Safe Community